



INVESTIGATOR'S ANNUAL REPORT

United States Department of the Interior
National Park Service

All or some of the information you provide may become available to the public.

OMB # (1024-0236)
Exp. Date (11/30/2010)
Form No. (10-226)

Reporting Year: 2007	Park: Shenandoah NP	Select the type of permit this report addresses: Scientific Study							
Name of principal investigator or responsible official: Evan Grant		Office Phone: 301 497 5842							
Mailing address: USGS-PWRC 12100 Beech Forest Rd. Laurel, MD 20708 USA		Office FAX Office Email ehgrant@usgs.gov							
Additional investigators or key field assistants (first name, last name, office phone, office email) <table><tr><td>Name: Larissa L. Bailey</td><td>Phone: 301-497-5637</td><td>Email: lbailey@usgs.gov</td></tr><tr><td>Name: Sandra Mattfelt</td><td>Phone: 301-497-5559</td><td>Email: smatfeldt@usgs.gov</td></tr></table>				Name: Larissa L. Bailey	Phone: 301-497-5637	Email: lbailey@usgs.gov	Name: Sandra Mattfelt	Phone: 301-497-5559	Email: smatfeldt@usgs.gov
Name: Larissa L. Bailey	Phone: 301-497-5637	Email: lbailey@usgs.gov							
Name: Sandra Mattfelt	Phone: 301-497-5559	Email: smatfeldt@usgs.gov							
Project Title (maximum 300 characters): On the movement of stream salamanders: distribution, response to ecological conditions, and contribution to population growth in a community of Plethodontid salamanders.									
Park-assigned Study or Activity #: SHEN-00333	Park-assigned Permit #: SHEN-2007-SCI-0002	Permit Start Date: Mar 01, 2007	Permit Expiration Date: Nov 30, 2009						
Scientific Study Starting Date: Mar 01, 2007		Estimated Scientific Study Ending Date: Nov 30, 2009							
For either a Scientific Study or a Science Education Activity, the status is: Continuing		For a Scientific Study that is completed, please check each of the following that applies: <input type="checkbox"/> A final report has been provided to the park or will be provided to the park within the next two years <input type="checkbox"/> Copies of field notes, data files, photos, or other study records, as agreed, have been provided to the park <input type="checkbox"/> All collected and retained specimens have been cataloged into the NPS catalog system and NPS has processed loan agreements as needed							
Activity Type: Research									
Subject/Discipline: Herpetology (Amphibians / Reptiles)									

Purpose of Scientific Study or Science Education Activity during the reporting year (maximum 4000 characters):

The objective of this research is to determine if stream salamander dispersal is related to the spatial configuration of stream segments and/or density of conspecifics. Results will inform management and conservation actions at the park and landscape level.

Findings and status of Scientific Study or accomplishments of Science Education Activity during the reporting year (maximum 4000 characters):

I visited fourteen 40 m segments on 3 streams in the Jeremy's Run area, 2 streams near milepost 19-20, and 5 streams in the Jewell Hollow area of the park. Three-four surveys were conducted on each segment from May through September 2007. I captured and marked a total of 918 *Eurycea bislineata*, 518 *Desmognathus fuscus*, 2614 *Desmognathus monticola*, 14 *Pseudotriton ruber* and 749 *Gyrinophilus porphyriticus* of all ages across all sites. The streams in Jeremy's Run area had noticeably fewer salamanders per stream

segment, and these streams had significant drying by July. All streams exhibited some degree of drying over the four sampling occasions.

Of the marked animals, I translocated 98 *E. bislineata*, 76 *D. fuscus*, 188 *D. monticola*, 4 *P. ruber* and 177 *G. porphyriticus* following protocols. I recaptured multiple individuals that had been translocated, and are in the process of estimating survival and population sizes for all stream segments.

I plan to continue this research through September 2008, following the protocols submitted to the park.

For Scientific Studies (not Science Education Activities), were any specimens collected and removed from the park but not destroyed during analysis?	
No	
Funding specifically used in this park this reporting year that was provided by NPS (enter dollar amount): \$0	Funding specifically used in this park this reporting year that was provided by all other sources (enter dollar amount): \$0
List any other U.S. Government Agencies supporting this study or activity and the funding each provided this reporting year:	

Paperwork Reduction Act Statement: A federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Public reporting for this collection of information is estimated to average 1.625 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms. Direct comments regarding this burden estimate or any aspect of this form to Dr. John G. Dennis, Natural Resources (3127 MIB), National Park Service, 1849 C Street, N.W., Washington, DC 20240.
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